

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 18, 2001, 15:53:41 ; Search time 22.87 Seconds
(without alignments)
2025.218 Million cell updates/sec

Title: US-09-587-111-5
Perfect score: 4004
Sequence: 1 MTPSSSPVFRLETLTGGOE.....EDEDGASENNYVYQLQSN 764

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 412676 seqs, 60623988 residues

Total number of hits satisfying chosen parameters: 412676

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

A_Geneseq_0601:*

- 1: /SIDSB8/gcgdata/geneseq/geneseq/AA1980.DAT:*
- 2: /SIDSB8/gcgdata/geneseq/geneseq/AA1981.DAT:*
- 3: /SIDSB8/gcgdata/geneseq/geneseq/AA1982.DAT:*
- 4: /SIDSB8/gcgdata/geneseq/geneseq/AA1983.DAT:*
- 5: /SIDSB8/gcgdata/geneseq/geneseq/AA1984.DAT:*
- 6: /SIDSB8/gcgdata/geneseq/geneseq/AA1985.DAT:*
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- 11: /SIDSB8/gcgdata/geneseq/geneseq/AA1990.DAT:*
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- 14: /SIDSB8/gcgdata/geneseq/geneseq/AA1993.DAT:*
- 15: /SIDSB8/gcgdata/geneseq/geneseq/AA1994.DAT:*
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- 18: /SIDSB8/gcgdata/geneseq/geneseq/AA1997.DAT:*
- 19: /SIDSB8/gcgdata/geneseq/geneseq/AA1998.DAT:*
- 20: /SIDSB8/gcgdata/geneseq/geneseq/AA1999.DAT:*
- 21: /SIDSB8/gcgdata/geneseq/geneseq/AA2000.DAT:*
- 22: /SIDSB8/gcgdata/geneseq/geneseq/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	4004	100.0	764	20	AAV29469 Human vanilloid re
2	4004	100.0	764	20	AAV06559 Human vanilloid re
3	4004	100.0	764	21	AAV97358 Human VR-2 protein
4	4004	100.0	764	22	AAV83562 Human vanilloid re
5	3988.5	99.6	763	20	AAV24308 Human vanilloid re
6	3988.5	99.6	763	20	AAV29471 Human vanilloid re
7	3939	98.4	764	21	AAV84834 Amino acid sequenc
8	3258	81.4	630	21	AAV97364 Human VR-2 (altern
9	3051.5	76.2	761	20	AAV06556 Rat vanilloid rece
10	3051.5	76.2	761	20	AAV9790 Rat VRRP-1 (VR2) c
11	3036.5	75.8	727	20	AAV06560 Human vanilloid re

12	3036.5	75.8	727	20	AAV99798 Human VRRP-1 (VR2)
13	2240	55.9	436	21	AAV97359 Human VR-2 (altern
14	2230	55.7	554	21	AAV97360 Rat partial VR-2 p
15	1689	42.2	843	20	AAV06561 Chicken Capsaicin
16	1689	42.2	843	20	AAV99799 Chicken VRI capsa
17	1652	41.3	838	20	AAV06555 Rat capsaicin rece
18	1652	41.3	838	20	AAV9789 Rat VRI capsaicin
19	1651.5	41.2	839	21	AAV97357 Human VR-1 protein
20	1648.5	41.2	839	21	AAV06478 Human vanilloid re
21	1644.5	41.1	839	20	AAV30155 A human vanilloid
22	1644.5	41.1	839	20	AAV06558 Human capsaicin re
23	1644.5	41.1	839	21	AAV32127 Human vanilloid re
24	1640.5	41.0	839	20	AAV30152 A human vanilloid
25	1638.5	40.9	839	20	AAV30153 A partial human va
26	1455	36.3	963	21	AAV06479 Human vanilloid re
27	1440	36.0	279	19	AAV74908 Human secreted pro
28	956.5	23.9	217	20	AAV29470 Human vanilloid re
29	637	15.9	725	22	AAU00412 Human calcium ion
30	635	15.9	732	22	AAU00413 Human calcium ion
31	634	15.8	725	22	AAV31595 Amino acid sequenc
32	607.5	15.2	727	22	AAV31596 Amino acid sequenc
33	482.5	12.1	451	22	AAU00414 Human calcium ion
34	274	6.8	57	20	AAV9793 Human T11251 amino
35	272	6.8	232	19	AAV75021 Human secreted pro
36	247	6.2	71	20	AAV9792 Rat VRI capsaicin
37	224.5	5.6	974	19	AAV55960 Human transient re
38	146	3.6	1095	20	AAV00931 Prostate tumour de
39	144.5	3.6	1104	21	AAV95437 Human calcium chan
40	140.5	3.5	1791	22	AAV20121 Human sodium chan
41	140	3.5	1214	16	AAV80097 Black widow spider
42	138.5	3.5	352	21	AAV11616 D. limittis ankyrin
43	138.5	3.5	1745	19	AAV70608 Full length ankyri
44	138.5	3.5	1745	19	AAV76776 D. limittis ankyrin
45	138.5	3.5	1745	21	AAV11589 D. limittis ankyrin

ALIGNMENTS

RESULT 1	
AAV29469	AAV29469 standard; Protein: 764 AA.
XX	XX
AC	AAV29469;
XX	XX
DT	08-OCT-1999 (first entry)
XX	XX
DE	Human vanilloid receptor homologue VANILREP2.
XX	XX
KW	Human; vanilloid receptor homologue; VANILREP2; polymorphic variant;
KW	PVP-1; therapy: diagnosis: chronic pain; neuropathic; postoperative;
KW	rheumatoid arthritis; neuralgia; algosia; nerve injury; ischemia;
KW	neurodegeneration; stroke; incontinence; inflammatory disorder.
XX	XX
OS	Homo sapiens.
XX	XX
PN	MO9937765-A1.
PD	29-JUL-1999.
XX	XX
PF	25-JAN-1999; 99WO-EP00420.
XX	XX
PR	20-JAN-1999; 99GB-0001209.
PR	27-JAN-1998; 98EP-0300549.
PR	26-OCT-1998; 98GB-0023421.
XX	XX
PA	(SMIK) SMITHKLINE BEECHAM PLC.
XX	XX
PI	Davis JB, Duckworth DM, Hayes PD;
XX	XX
DR	WPI: 1999-479049/40.
DR	N-PSDB: AA207114.
XX	XX

PT New human vanilloid receptor homologues (VANILREP2)
 XX
 PS Claim 4; Page 30-32; 47pp; English.

CC The present sequence represents a human vanilloid receptor homologue,
 CC designated VANILREP2. VANILREP2 can be used to diagnose disease or
 CC susceptibility to disease related to expression or activity of
 CC VANILREP2 polypeptides. VANILREP2 may be used to treat diseases
 CC including pain, (for example chronic, neuropathic, postoperative,
 CC rheumatoid arthritis), neuralgia, algosia, nerve injury, ischaemia,
 CC neurodegeneration, stroke, incontinence, and inflammatory disorders.

XX Sequence 764 AA:

Query Match 100.0%; Score 4004; DB 20; Length 764;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MTSPPSSPVFRLLETLDGQEDGSEADRGKLDPSGLPPMESOFQEDRKRFAPQIRVNLNY 60
 DB 1 mtsppsspvfreltldgsgedsgadrgkldfsgslpmesqfsgedckfapqirvnlly 60
 QY 61 RKGTASQPDPRFDRDLFNAVSRGVPEDLAQLPEYLSKTSKYITDSEYTGSTGKTCL 120
 DB 61 rkgtasqpdprfdrdlfnavsrgvpedlaqlpeylsktskyltdeyestgsgtkcl 120
 QY 121 MKAVNLKDGYNACILPLQIDRDSGNPQPLVNAQCTDDYRGHSALHAIKRSLOCVK 180
 DB 121 mkavnlkdgynacilpllqidrdsngpplvnaqctddyrghsalhatkrslocvk 180
 QY 181 LLVENGANVHARACGRFQKGGCTGFEGELPLSLACTKMDVSYLLENHPHAPASIDA 240
 DB 181 llvenganvharaagrffqkggctgfegelpslactkmdvsvyllenphpasida 240
 QY 241 TDSQNTVHLALVMSDSNAEMIALVTSWYDGLLAGARLCTVQLEDRNODITPLKL 300
 DB 241 tdsqntvhlalvmsdsnaemialvtswydglagarlctvqledrnoditplkl 300
 QY 301 AAKEKKEIEFRHILQREFSGLSHLRKFTWCVGVRSVLYDLAVDSCEENSVLEIIAF 360
 DB 301 aakekkeiefrhiloqrefsglshtsrkftwcvgvrvsvlydlavdsceensvleiiatf 360
 QY 361 HCKSPHRRHVVLEPUNKLQAKMDLIPKFEFLNCLNIWFTTAVAYHQPILKKQAA 420
 DB 361 hcksprrhrrmvvlepnkllqakmdlipkffelnclniwfftavayhqpilkkqaa 420
 QY 421 PHLKAEVNSMILTGHIILIGITLLWGLMYFMRHVFIMISFIDSYFELLFQAL 480
 DB 421 phlkaeavnsmlltghililggitllwglmyfmrhvfimisfidsyfelfellfqal 480
 QY 481 TVVSOVLCEFLAIEWLPLVLSALVGMNLXYTRGFQHTGIYSVMIOKVIIRDLRFL 540
 DB 481 tvvsovlceflaiewlplvlsalvgmnlxytrgfqhtgiysvmiokvilrdlrfl 540
 QY 541 IYLVFEGFAVALVLSQDAPRPAFPGDNATESVQPMEGDEGNGAQYRILEASLEL 600
 DB 541 iylvfegfaavalvlsqdaprpapfgdnatesvqpmegdegngaqyrlleaslel 600
 QY 601 FKFTTGMELAFQEDLHRRGWLILLAVLITLILNMLIALMSEYVNSVATDSMSIW 660
 DB 601 fkfttgmelafoedlhrhrgwllllavlitlilnmlialmsevyvnsvatdsmsiw 660
 QY 661 KLOKAIIVLEMGYMWCKRKORAGVMLTVGFKPGSPDERKCFVVEEVNMAWBOETPT 720
 DB 661 klkaiisvlemgymwckrkoragvmltvgfkpgspderkcfvveevnmaswboetpt 720
 QY 721 LCEDPSGAGVPTLENPVLASPPKEDDGAEEENVPVQLQSN 764
 DB 721 lcedpsgagvptlenpvlasppekdedgaseenypvqlqsn 764

RESULT 2

AAV06559
 ID AAY06559 standard; Protein: 764 AA.

AC AAY06559;

DT 08-OCT-1999 (first entry)

DE Human vanilloid receptor-related polypeptide 1 (VRP-1).

XX Vanilloid receptor-related polypeptide 1; VRP-1; VR2;

KW capsaicin receptor; VR1; human; vanilloid; analgesic; pain;

KW inflammation; therapy; diagnosis.

OS Homo sapiens.

PM W09937675-A1.

PD 29-JUL-1999.

XX 22-JAN-1999; 99WO-US01418.

XX 22-JAN-1998; 98US-0072151.

PA (REBC) UNIV CALIFORNIA.

PI Brake AJ, Caterina M, Julius DJ;

XX WPI: 1999-469113/39.

DR N-PSDB: AAX87492.

PS Claim 4; Page 110-112; 120pp; English.

XX The present sequence represents human vanilloid receptor-related

CC polypeptide 1 (VRP-1 or VR2), as deduced from a cDNA clone (see

CC AAX87492) isolated from human CCRF-CEM cells. VRP-1 is an

CC example of a capsaicin receptor-related polypeptide of the

CC invention. It is not activated by capsaicin or heat, but may

CC interact with the novel capsaicin receptor VR1 (see AAY06558). The

CC invention provides vanilloid receptor polypeptides and

CC polynucleotides, including capsaicin receptor-related polypeptides

CC and polynucleotides, as well as expression vectors, host cells and

CC transgenic animals. It also provides a method of using such

CC receptors to identify vanilloid compounds in natural products or

CC to screen candidate compounds that modulate capsaicin receptor

CC function for use as analgesics (vanilloid analogues, therapeutic

CC antibodies, antisense oligonucleotides, capsaicin receptor-encoding

CC polynucleotides for gene therapy), flavour-enhancing agents, etc.

CC Capsaicin receptor-related polypeptides and specific antibodies can

CC also be used for the diagnosis and treatment of human disease and

XX pain.

XX Sequence 764 AA:

Query Match 100.0%; Score 4004; DB 20; Length 764;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MTSPPSSPVFRLLETLDGQEDGSEADRGKLDPSGLPPMESOFQEDRKRFAPQIRVNLNY 60
 DB 1 mtsppsspvfreltldgsgedsgadrgkldfsgslpmesqfsgedckfapqirvnlly 60
 QY 61 RKGTASQPDPRFDRDLFNAVSRGVPEDLAQLPEYLSKTSKYITDSEYTGSTGKTCL 120
 DB 61 rkgtasqpdprfdrdlfnavsrgvpedlaqlpeylsktskyltdeyestgsgtkcl 120
 QY 121 MKAVNLKDGYNACILPLQIDRDSGNPQPLVNAQCTDDYRGHSALHAIKRSLOCVK 180
 DB 121 mkavnlkdgynacilpllqidrdsngpplvnaqctddyrghsalhatkrslocvk 180

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QY 181 LIVENGANVHARACGRFQKGGCTCFYFGEELPLSLACTKQMDVSYLLENPHOPASIOA 240
Db 181 livenGANvharacgrffqkggctcfyfgeelpslactkqmdvsvyllenphopasIga 240
QY 241 TDSQGNVLAHALVMSIDNSAENIALVTSMDGLDAGARLCPVTOLEDIRNLQDLTPKL 300
Db 241 tdsqgnvLAhalvmsidnsaenialvtsmdgllagarlcpvtqledirnlqdltpkl 300
QY 301 AAKEKIKELFRILLQREFSGLSHLRSKFTWCYGPVRVSLVDLAVSDCEENSULEITAF 360
Db 301 aakegikELfrillQrefsglsHlrskftwcYgpvrVslvdLAVsdceensuleiIaf 360
QY 361 HCKSHRRRMVLEPRLNKLLQAKMDLLIPKFFLFLNLIYFIFTAAVYHOPTKKQAA 420
Db 361 hckshrrrmvleprlnkllQakmdllIPkfflflnliYfiftAAvYhoptkKqaa 420
QY 421 PHLKAEGVNSMLTGHILLGLIYLVQGLWYFMRHVFETWISFIDYFELLFQALL 480
Db 421 phlkaevnsmLtghillGLIyLVqGLWYfmrHVFETwISfIDyFellfQall 480
QY 481 TVVSOVLCEFLAIEWYLPILVSLVGLMNLVYTRGFQHTGYSVMIOKVLIRDLRL 540
Db 481 tvvsoVLceflAIEWyLPilVslVGLmNLvYtrGFqHTgYSvmIOkVlIRdlRL 540
QY 541 IYLVFLGFAVALVLSQEAWRPEAPTPNATESVQPMEGODENGAQYRGILFASLEL 600
Db 541 iYlvflGfaValVlsQeAWrPeAPtpNatesVqPMegodeNGaQYrgilFaslel 600
QY 601 FKFTTGKSELAFQEOJLHRGWLLLLAYVLTLYLLMLTALMSEFVNSVANDSWSIW 660
Db 601 fkfttgkSELafQEOjLhrGwLLllAYvLTlyLLmLTalMsefVnsvANDsWsiw 660
QY 661 KLOKATSVLEMENGYWMCRRKORAGVMTLVGTRKPDSPDERKCFVEEVNMAWMCOTLPT 720
Db 661 klQkatsvleMenGyWmcRRkORagVMTlvGtrKpdSPderKcfveevnMAwmcotlPt 720
QY 721 LCEDPSGAGVPPTLENPVLASPKEDGASEENVVQVLQSN 764
Db 721 lcedpsgagvpptleNpVLasPKedGaseenvVvqlQsn 764

RESULT 3
AAY97358
ID AAY97358 standard; Protein: 764 AA.
AC AAY97358;
XX
XX 05-SEP-2000 (first entry)
XX
XX Human VR-2 protein.
XX
XX VR-2; human; vanilloid receptor; nociceptor; pain signalling;
XX hyperalgesia; musculoskeletal disorder; neuropathic pain;
XX chromosome 17p11-12; gene therapy.
XX
XX Homo sapiens.
XX
XX Key location/Qualifiers
XX Modified-site 2..5
XX /note- "cGMP-dependent protein kinase
XX phosphorylation site"
XX Domain 162..194
XX /label- ankryin_repeat_domain
XX Modified-site 169..174
XX /note- "myristoylation site"
XX Modified-site 171..174
XX /note- "N-glycosylation site"
XX Modified-site 192..195
XX /note- "N-glycosylation site"
XX Domain 208..243
XX /label- ankryin_repeat_domain
XX 293..328
XX Domain

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FT FT /note- "cGMP-dependent protein kinase
FT FT phosphorylation site"
FT FT Modified-site 368..375
FT FT /note- "tyrosine kinase phosphorylation site"
FT FT 391..410
FT FT /label- transmembrane_domain
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FT FT 486..508
FT FT /label- transmembrane_domain
FT FT Modified-site 499..502
FT FT /note- "cGMP-dependent protein kinase
FT FT phosphorylation site"
FT FT Domain 538..556
FT FT /label- transmembrane_domain
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FT FT /note- "N-glycosylation site"
FT FT Domain 621..645
FT FT /label- transmembrane_domain
FT FT Modified-site 622..628
FT FT /note- "tyrosine kinase phosphorylation site"
FT FT 749..752
FT FT /note- "N-glycosylation site"
FT FT Modified-site 765..770
FT FT /note- "myristoylation site"

W0200029577-A1.
PD 25-MAY-2000.
PE 12-NOV-1999; 99WO-US26701.
XX
XX 13-NOV-1998; 98US-0108322.
XX 28-DEC-1998; 98US-0114078.
XX 26-FEB-1999; 99US-0258633.
XX 19-OCT-1999; 99US-0421134.
XX
XX (MILL-) MILLENNIUM PHARM INC.
XX
XX Curtis RAD;
XX
XX WPI: 2000-387790/33.
XX
XX N-PSDB; AAA30254.
XX
XX New capsacin/vanilloid receptor polynucleotides and polypeptides, used
XX to modulate pain signalling mechanisms
XX
XX Claim 11; Fig 2; 183pp; English.
XX
XX The present sequence is the protein sequence for human
XX capsacin/vanilloid receptor VR-2, which is involved in pain signalling.
XX The coding sequence was isolated by searching a heart cDNA library for
XX genes encoding novel receptors of the capsacin/vanilloid family, and has
XX been shown to be located at chromosome 17p11-12. This region has been
XX associated with myasthenia gravis, Smith-Magenis syndrome, CORD5,
XX Cone-rod dystrophy, choroidal dystrophy, central areolar and retinal cone
XX dystrophy, and it is possible that the protein may be used to treat or
XX diagnose these disorders. In addition, the gene, protein and its
XX antibodies can be used to diagnose and treat hyperalgesia, inflammation,
XX infection, ischemia, joint pain, tooth pain, headaches, pain associated
XX with surgery or neuropathic pain, possibly via the use of gene therapy.
XX
XX Sequence 764 AA:
SO

```

Query Match 100.0%; Score 4004; DB 21; Length 764;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 764; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	MTSPSSSPVFELEFLELDGDEGSGADBGKLDLDFGSGLPMSJOCGDEGRKAPAOIRVNLVY	60
Dp	1	mtspssspvfrlecltgggqgeadqgkldfsgslpmpsqzfqgeurklapdrlvnlhy	60
QY	61	RKGTGASOPDENREDRDLRFNAVSRGVEDJAGLPEYLSTKSTXYLTDSETEESTKCTCH	120
Dp	61	rkgysaagpndrdrdrflnavsrypedlaqpeylsktskxyltdseytegstktcl	120
QY	121	MKAVALNLKQCVNACITLPLLOJIDRSGNPOLVNAOCTDDBYYRGHSALHIAIEKRSLQCVK	180
Dp	121	mkavalnlkdqvnacitlplldidrasgnpdpjlvaqctddyrghsalhiaiekrslqcvk	180
QY	181	LLVENGANVHARACGRFFOKGOCGCEFEGLPISLACTKOMPVSYLLENPHQPSLQA	240
Dp	181	llvenganvharacgrffqkqgqgcfcifgglpblslactqwdvwsyllempqpslqga	240
QY	241	TDSCGNFVLAHALVMI SDNSAENILVTSMYDGLLOAGARLCPTVQLEDIRNLQDLTPKLI	300
Dp	241	tdsgnfvvlhalvmlsdnsaenialvtsmydglldaggarlcpvqlgedlrnlqdltpkli	300
QY	301	AAKEGKIEIFPHNILLQREPSGLSHSRKFTEMKCPVAVSLYDLASVDSCENSVLEETIAF	360
Dp	301	aakegkieleifphnillqrefsglshsrkftemcgyprvavsllydlasvdsceensvleleiaf	360
QY	361	HCKSPHRRMVVLEPLNKLOAKKDDLIPRFLNLFCLNLYMFIFPVAVAHOPTLKQAA	420
Dp	361	hcksphrmvvleplnlkloakddlprflnlfclnlymfifpvaavahoptlkqaa	420
QY	421	PHLAEVONSMLTGHTLILLGTYLLVGOVMFYRRHVEIWTISFDISYEILFELQALD	480
Dp	421	phlkaevonsmltghlilllgtylllvgovmfyrhrhveiwtisfdisyeilefeloald	480
QY	481	TVVSQVLCFLAIEWYLPBLVSALVGLMNLITYTRGQOHFTGIVSMIQVILRDLRFLI	540
Dp	481	tvvsqvlcflaiewylpblvsalvglmnlitytrgqohftgivsmiqvilkdlrflil	540
QY	541	IYLVFLGFSAVALVLSLOEMRRPAPRPGPNATESVQCMEOGDEGNGCAQVRGILTEASLEI	600
Dp	541	ilylvflgfavaavlvsloemrrpaprpgpnatesvqcmegdegnagaqyrgilteaslel	600
QY	601	FKFPIGMELAEFOEOLHFRGCVLILLLLLAAYLVLYTILLNNLIALMSEFVSVAITDSMSIW	660
Dp	601	fkftfgmgelaifegqlhfrgmvlilllllayllylillnnlialmsefvsvaitdswisw	660
QY	661	KLOKAISVLEMENGYWMCRRKORAGVMLTVGTRKPDGSPDERMCFRVEEVMASMEQTLPT	720
Dp	661	klokaisvlemengywwcrrkqragvmltvgtkpdgspterwcfveevmasmeqtlpt	720
QY	721	LCEDPSGAGVPRTELENVPLASPREDEDDGASEENYVYVOLLQSN 764	
Dp	721	lcedpsgagvprtleenylvlaspredddgaseenyvyvollygsn 764	

XX	4	RESULT
XX	AAB35622	
ID	AAB35622	standard; Protein; 764 AA.
XX	AC	
XX	AAB35622;	
DT	14-FEB-2001	(first entry)
DE	Human vanilloid receptor like receptor protein.	
XX	VR-L; vanilloid receptor-like receptor; pain; infection; allergy;	
KW	mechanical injury; lymphoid tissue; human.	
XX		
OS	Homo sapiens.	
XX		
PN	GB2346882-A.	
XX		
PD	23-AUG-2000.	
XX		
PF	02-DEC-1999.	99GB-0028566.

XX
PR 08-DEC-1998; 98GB-0027016.
XX
PA (MERI) MERCK SHARP & DOHME LTD.
XX
PI Bonmert TP;
XX WPI: 2001-064250/08.
DR N-PSDB; AAC60297.
XX
XX New polynucleotide encoding human vanilloid receptor-like receptor for diagnosing and treating pain, infections, allergies, and cancers -
PT
XX
PS
XX
XX Claim 1; Fig 1; 36pp; English.

CC The present invention relates to the human vanilloid receptor-like
CC receptor. This receptor may be used for diagnosing or treating
CC conditions associated with altered vanilloid receptor-like (VR-L)
CC receptor expression. It may also be used to treat abnormal conditions
CC associated with pain. Conditions or diseases that can be diagnosed or
CC treated include viral, bacterial and fungal infections, allergic
CC responses, mechanical injury associated with trauma, hereditary
CC diseases, lymphoma or carcinoma, or other conditions which activate
CC the genes of the lymphoid tissues.

XX
XX Sequence 764 AA;

Query Match	100.0%	Score 4004	DB 22	Length 764	
Best Local Similarity	100.0%	Pred. No. 0			
Matches 764	Conservative 0	Mismatches 0	Indels 0	Gaps 0	
OY	1	MTSPSSPVFLFLETLADGOEDGSEADRGKLPFGSLPPMESQPOGEDRRKFAPOIRVNLNY	60		
Db	1	mtspsspvflfletlidgsgdgsdardkldtfgslpmpesqfggedrkfapqirvnlhy	60		
OY	61	RKGTASQDPDRPRFRDRRLFNAAVSKGVYEDLAGLEPEYLSKTSKYLTDSTYTGSGTKTCL	120		
Db	61	rkgtasqdpdrprfrdrtrlfnavstrgvpedlaqlpeylsktskyltdseytegsfgtkcl	120		
OY	121	MKAVNLKDGVAACLPLPLDIDRDGSGNPOLPVNAACCTDDYRGSHALHAIEKRSLQCYK	180		
Db	121	mkavnlkdgvnaclplplldidrgsgnpgplvnaqctddyrgshalhalakrsldqcyk	180		
OY	181	LLVENGANVHARACGRFQKGGCTCYFGELPLSLAACKQMDVVSYLENPHQASLOA	240		
Db	181	llvengannvhacgrfgtkggctcyfgeplslsaacltkqdvvsyllenphqasldq	240		
OY	241	TDSCGNTVLAHLVMTSDMSAENIALVTSVYOGILOAGARLCTVPLEDRNLQDTPRLK	300		
Db	241	tdsggntvlahlvmtdmsaenialvtsmyoglldagarlcpvledtrnldqdtprlki	300		
OY	301	AAKECKIEIFRHIILOREFSGLSLSRKETEMCYGPRVSLYDLASVDCSENSVLEIIAIF	360		
Db	301	aakegkieifrhilqrefsglshlsrktfemcygprvsllydlasvdcseensvleiaif	360		
OY	361	HCKSHRRHRMVLDEPLNKLLOAKMPLLPKFFLNLCLNIYHFFITAAVAYHOPTLAKKOA	420		
Db	361	hckshrrhrmvleplnklldakmldlpkfflnlclniyhffitavayhoptlkkaa	420		
OY	421	PHLKAEVNSMLTGHILILGGYTLVAGOLWAFPMRRHVFIMISFIDSFFELLPFOALL	480		
Db	421	phlkaevnsmlltghililggylvlgqlwafwrtrnhvfimisfidseyfellflfqall	480		
OY	481	TVNSOVLCFLAIEWYLPPLVSAVLVGLNLLVYTRGFOHTGIVSMIOKVLIRDLLRFL	540		
Db	481	tvnsqvlcflaiewylpplvlsalvlgwnlllytrgfhgtgyswimqkvllirdllrfll	540		
OY	541	IYIVLTFEFAVALVLSQEGARPRAPCTGPNMTESQPMEGOEDEGNGOVRILFASIEL	600		
Db	541	iyivlltfgravalvlsqdearpreapctgpnatesvqpmegdegnqayrgvllfasiel	600		
OY	601	FKFTTGMGIELFOEDLHRGAVLLILLAYVLLTVTILLNMLALMSEFVNVAATDSWIM	660		

|||||
Db 601 Kftlmgelaqeglhfrgmwlllllaylltylllmlalmseltnsvaldswsiw 660
Qy 661 KLOKATSVLEMENGYWCKRKORAGVMTVGRKPDGSPDERKCFRVEEVNMA5MEQTLP 720
Db 661 Ktqkaistvlemengywwckkqragvmltvgtkpdgsperclfrveevnmasweqtlpt 720
Qy 721 LCEDPGAGVPTLTLENPVLASPKKEDGASENYPVOLQSN 764
Db 721 lcedpsgagvptltlenpvlasppkdedgaseenyvpyqlsqn 764
RESULT 5
AA42308
ID AA42308 standard; Protein: 763 AA.
XX
AC AA42308;
XX
D7 06-DEC-1999 (first entry)
XX
DE Human vanilloid receptor-like cation channel (hVRCC).
XX
KW Vanilloid; capsaicin; neuron; selective; calcium; cation; receptor; pain;
KW Inflammation; brain disease; cancer; autoimmune disorder.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
ET Misc-difference 5 /note= "Optionally Phe in an allelic variant"
ET Misc-difference 417..418 /note= "Optionally there is an insertion of a Gln residue
FT in an allelic variant"
XX
PN W09946377-A2.
XX
PD 16-SEP-1999.
XX
PE 10-MAR-1999; 99WO-EP01550.
XX
PR 11-MAR-1998; 98EP-0400565.
XX
PA (SNFI) SANOFI-SYNTHELABO.
PI Partiseti M, Renard S;
XX
DR WPI: 1999-571722/48.
DR N-PSDB: AA42308.
XX
PT New receptor-like channel polypeptide and polynucleotide useful for
PT prevention and treatment of cancer, autoimmune disease, brain disease
PT and ulcers -
XX
PS Claim 12; Page 15; 50pp; English.
XX
CC This sequence represents a human vanilloid receptor-like cation channel
CC (hVRCC). This channel is activated by vanilloids such as capsaicin
CC and resiniferatoxin, and is expressed in a variety of tissues,
CC particularly in nervous tissue such as the amygdala, substantia nigra,
CC thalamus, dorsal root ganglia and spinal cord. Vanilloids are natural
CC compounds which are known to trigger cation permeability in the
CC peripheral neurons involved in transmission of noxious stimuli (e.g.,
CC mechanical, chemical or thermal). A recently discovered rat
CC vanilloid-gated cation channel, which is highly expressed in dorsal root
CC ganglia, has six putative transmembrane domains, giving it significant
CC structural homology with "store-operated" calcium channels, and is highly
CC selective for calcium ions. hVRCC and nucleotides encoding it can be used
CC in prevention, diagnosis or therapy of disorders that may be associated
CC with an excess or deficiency of hVRCC. Disorders detected or treated
CC using hVRCC proteins, nucleotides or antagonists include chronic
CC inflammation, acute and chronic pain, brain diseases, abnormal
CC proliferation and cancer, ulcers, autoimmune diseases, control of viscera
CC innervated by the dorsal root ganglia neurons, to mimic or antagonise

CC effect of endogenous neurotransmitters and hormones, and to inhibit graft
CC rejection by promoting immunosuppression. Nucleotide sequences encoding
CC hVRCC are also useful for chromosome localisation.
XX
SQ Sequence 763 AA:
Query Match 99.6%; Score 3988.5; DB 20; Length 763;
Best local similarity 99.9%; Pred No. 0;
Matches 763; Conservative 0; Mismatches 0; Indels 1; Gaps 1:
Qy 1 MTPSSSPVFRLETTLDGGOEDSEADRGKLDGSGGLPME5QFOGDRKRPADIRVNLVY 60
Db 1 mtpssspvfrletldggedgseadrgklldgsgglpmpesqfqqgedrklfapqirnlly 60
Qy 61 RKGTGASOPDRNRPDRLPFNAVSRGVPRPDLAGLPYLSKTSKYLTDSCTEGSTGKTCL 120
Db 61 rkgtgasopdrnfrdrpfnavsrgvprpdlaglpelylsktskyltdseytsgstgktcl 120
Qy 121 MKAVLNLKQGVNACILPLLOIDRDSGNPQPLVNAOCTDDYRGRSHALHVAIEKRSIQCYK 180
Db 121 mkavlnlkqgvnaccilplliqidtdsgnppqlvnaqctddyrgshalhaiekrslqcyk 180
Qy 181 LIVENGANVHARACGRFFQKGGCTCFYFGEPLSLACTKQMDVSYLLBNPHQASLQA 240
Db 181 livenGANvharaGrffqkggctcfyfgeplslactkQmdvSYllbnphqaslaqa 240
Qy 241 TDSQNTVLHALVMSDNSAENALVTSMDGLQAGARLCPVQLEDIRNLODLPKL 300
Db 241 tdsqntvlhalvmsdNSAenAlvtSMYdglqagarlcpvqlEdlrnqdlpkl 300
Qy 301 AKKEGKIEIFRHILOREFGSLHSKRFTWECYGPVRSYLDASVDSCENSVLEIIF 360
Db 301 aakegkieifrhilorefgslhskrftwecygpvrSYldasvdsceNSvleIif 360
Qy 361 HCKSPRHRRMYVLEPLNLKLOAKWDLLEKFFLNFLNCLIMEFTTAVAYHOPTLKKQA 420
Db 361 hckspRHrmvyleplnlkllqakwdlllpkfflnflcnllymftfaveyhgptlkk-aa 419
Qy 421 PHLKAEGVNSMLTGHITLLGSGITVLLVQGLWTFMRRHFWTMSFDSFEILLFQALL 480
Db 420 phlkaevGnsmltghitlllgsgitvllvqglwyfwrhfwTmsfdisfEillfqlall 479
Qy 481 TVVSOVLCFLATEWYPLVLSALVLGMLNLVYTRGEOHGTYSVIOGYTLRDLLRFL 540
Db 481 tvvsOvLcflateWypLVlsalVlgmnlVYtrGfhgtysvmlqVtlrdllrfl 539
Qy 541 IYLVLFGEFVALVLSQEAHPEAPRTGNATESVQPMKEGOEDEGNGAQRGLLEASLEL 600
Db 540 iylvlfgefvalvlsqEaHpeaprtGnatesvqpmeggedegngaqrgllEaslel 599
Qy 601 FKFTTGMGELAFQBOULHFRGMVLLLLAVVLLTYILLNMLTALMSETVNSVATDSWTW 660
Db 601 fktftgmGelafqEolhfrgmVllllayvlltylllmlalmseltnsvaldswsiw 659
Qy 661 KLOKATSVLEMENGYWCKRKORAGVMTVGRKPDGSPDERKCFRVEEVNMA5MEQTLP 720
Db 661 Ktqkaistvlemengywwckkqragvmltvgtkpdgsperclfrveevnmasweqtlpt 719
Qy 721 LCEDPGAGVPTLTLENPVLASPKKEDGASENYPVOLQSN 764
Db 720 lcedpsgagvptltlenpvlasppkdedgaseenyvpyqlsqn 763
RESULT 6
AA429471
ID AA429471 standard; Protein: 763 AA.
XX
AC AA429471;
XX
D7 08-OCT-1999 (first entry)
XX
DE Human vanilloid receptor homologue VANILREP2 polymorphic variant PVP-1.

```

XX Human: vanilloid receptor homologue; VANILREP2: polymorphic variant:
KM PVP-1; therapy: diagnosis: chronic pain; neuropathic; postoperative;
KM Rheumatoid arthritis; neuralgia; algisia; nerve injury; ischaemia;
KM neurodegeneration; stroke; incontinence; inflammatory disorder.
XX
OS Homo sapiens.
PN WO9337765-A1.
XX
PD 29-JUL-1999.
XX
PF 25-JAN-1999; 99WO-EP00420.
XX
PR 20-JAN-1999; 99GB-0001209.
PR 27-JAN-1998; 98EP-0300549.
PR 26-OCT-1998; 98GB-0023421.
XX
PA (SMIR ) SMITHKLINE BEECHAM PLC.
XX
PI Davis JB, Duckworth DM, Hayes PD:
XX
DR WPT: 1999-479049/40.
XX
DR N-PSDB: AA207116.
XX
PT New human vanilloid receptor homologues (VANILREP2)
XX
PS Claim 4: Page 35-37; 47pp; English.
XX
CC The present sequence represents a human vanilloid receptor homologue
CC VANILREP2 polymorphic variant PVP-1. VANILREP2 can be used to diagnose
CC disease or susceptibility to disease related to expression or activity
CC of VANILREP2 polypeptides. VANILREP2 may be used to treat diseases
CC including pain, (for example chronic, neuropathic, postoperative,
CC rheumatoid arthritis), neuralgia, algisia, nerve injury, ischaemia,
CC neurodegeneration, stroke, incontinence, and inflammatory disorders.
XX
SQ Sequence 763 AA:

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DB 420 pnhkaevgnsmlltghlllllggylllvqdlwyfwrhbfvstfidsyfellflfql 479
QY 481 TVSQVLCFLAIEWLPPLVSLVGLWMLLYTRGFQHTGIYSWTKVILLRDLRFL 540
DB 480 tvsqvlcflaiewlpplvslvglwmllytrgfqhtgiyswtkvillrdlrlfl 539
QY 541 IYLVFLFGFAVALVLSLSOAMRPEAPTGNATESVOPMGEDEGNAGQYRGILEASLEL 600
DB 540 IYLVFLFGFAVALVLSLSOAMRPEAPTGNATESVOPMGEDEGNAGQYRGILEASLEL 599
QY 601 FKFTTMCGLAEFOEQLHFRGMVLLLLAYVLLTYILLNMLIALMSETVNSVATDSWSIM 660
DB 600 fktftmgelaefqelhfrgmvllyllayvlltyillnmlialmsetvnsvaldswsiw 659
QY 661 KIQAISVLEEMENGYWCKKQKQAGVMTLVGTRPDGSPDERKCFRVEEVNMAWMEQTLPT 720
DB 660 k1qaisvleemengywwckkqragvmtlvgtkpdgsperwcfrveevnmasweqlpt 719
QY 721 ICEDPGAGVPTLENVPLASPPKEDGASEPNVYPVOLQSN 764
DB 720 lcepsgagvptlenvpilasppkedgaseenypvpqlqsn 763

RESULT 7
AAV84834
ID AAY84834 standard: Protein; 764 AA.
XX
AC AAY84834:
XX
DT 08-AUG-2000 (first entry)
XX
XX
XX Amino acid sequence of a vanilloid receptor-like (VR-L) protein.
XX
XX Cation channel protein; vanilloid receptor-like 1 protein; VR-L;
KM noxious heat; pain; inflammation; tissue damage; nociception;
KM gene therapy; sensory neuron; immune system; analgesic; immunomodulatory;
KM neuromodulatory.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Misc-difference 149 /note="Gly encoded by CAG"
FT Region 162..193 /note="ankyrin-like repeat"
FT Misc-difference 200
FT Region 208..240 /note="Lys encoded by AAT"
FT Region 293..323 /note="ankyrin-like repeat"
FT Region 391..410 /note="ankyrin-like repeat"
FT Domain /note="transmembrane domain 1"
FT Domain /note="transmembrane domain 2"
FT Domain /note="transmembrane domain 3"
FT Domain /note="transmembrane domain 4"
FT Domain /note="transmembrane domain 5"
FT Misc-difference 560 /note="Thr encoded by GCT"
FT Region 587..608 /note="possible pore loop"
FT Domain 619..645 /note="transmembrane domain 6"
FT Misc-difference 667 /note="unspecified amino acid encoded by TNT"
XX
XX WO200022121-A2.

```

20-APR-2000.
08-OCT-1999; 99WO-GB03348.
09-OCT-1998; 98GB-0022124.
(UNLO) UNIV COLLEGE LONDON.
Garcia R, Wood JN, England S;
WPI: 2000-31978/27.
P-PSDB; AAA14874.
Novel non-selective cation channel protein and nucleotides useful as screening agents and in gene therapy of disorders associated with sensory neurons and leucocytes such as pain, autoimmune disorders and leukemia
Claim 2; Fig 3A; 55pp; English.

aa Sequence 764 AA:

Query Match	98.48;	Score 3939;	DB 21;	Length 764;
Best Local Similarity	98.08;	Pred. No. 0;		
Matches 749; Conservative	6;	Mismatches 9;	Indels 0;	Gaps 0;

QY	1	MTQSSSPVFRLEFLLDGQEDGSEADNRKLDGSGLPMPMEQFQGEDRKRAPOIRVNLNT	60
Dp	1	mtqssspvfrleflldgqgedgsaadcrjklidfsgslpmpmeqfiggedrktkassqrlrvnlnt	60
QY	61	RKGASGSPDNPFRDRLDFNAVSRGVEDAGLPPEYLSKSTKLTLPSEYEGSTGTCL	120
Dp	61	rkgasgspdpnrldrldfnavsrgvpedaglppeylstkskyltldseyegstgtctl	120
QY	121	MKAVLNLKDGYNACILPPLQIDRDSGNPQPLVNAQCTDDYYRGSHALHIAIEKRSLOCVK	180
Dp	121	mkavlnlkdygnacilplqldrdsngpprlvnaqctddyrgshalhiaiekrsldcvk	180
QY	181	LLVENGAVNVARACGREGKQGGKCFEFGELPSLACTQMDVSVTLLENPHQPSALQA	240
Dp	181	llvengavnvaracgrrgfyqggkcfefgelplslactqwdvsvyllenphqpsalqa	240
QY	241	TDSOGNFVNLHALVMIISDNSAENIALVMSYDGLLQAAARLCPTVQLEDINLQDLPTKL	300
Dp	241	tdsognfvlhalvmlisdnseenialvmsydglllqaaarlcptvqledinldqltprkl	300
QY	301	AAKSGKLEIFPHILQREBSGLSHLSRKFTEMCGPRVNSLYDLASVDSCEANSVLEITAF	360
Dp	301	aaksgkleiifhiliqrebsglshlsrkftemcgyprvnslydlasvdsceansvleitaaf	360
QY	361	HCKSPHRBMVLEPRKLKLOAKKDDLIPKPELNFNLNYMFETFTVAVNAHOPPLKQAA	420
Dp	361	hcksphrbmvlprklkloakkdllipkpefnfnllymfetftvavnaqpplkkaaa	420
QY	421	PHLKAEVGNMNLGTGHLILLCGYTLVLVGOALFWRRHNVETWISFDISYEELIFLPQAL	480
Dp	421	phlkaevgnsmnlctghlililcgytlvlvgoalfwrrhvwetwiflwsydsvefeilffnsl	480

Qy	481	TVVSQVLCFLAIEMVLPILNVSALVGLMLNLXYTRGQOHGITSVMIOXNTLRLFL	540
Db	481	lvsvslvcflvlewlpilvsalvlgwlnllytrgfqbhcqisyvmqkylldmvrflv	540
Qy	541	YLVFLFEGFAVALVLSLSQEARPEAPGPNATSEVQMEQOEONGCAQYRGILEASLEL	600
Db	541	lylvflfgfavalvslsqetwrrpaprsgpnatcevsqvmegedeqgaqyrgllleaslel	600
Qy	601	EKFITIGMSELAFQOQLAHRGCVLLLLLAIVLLYTLNLMIALMSTVSVATDSWSIW	660
Db	601	ikftigmelafigeqllhtrgwllllllayallcylllllmllalmsetvsvatdswsiw	660
Qy	661	KLOKAI SVLEMENGYMWCRRKQORAGVMLVGTGRKDSPPDERMCFRYEENVMASMEQRLPT	720
Db	661	kldqalxvlmenenymwccrrkqtrgwmltvqtkpdsppdermcfryeevnmaseqrlpt	720
Qy	721	LCEDPSGAGVPRTLLENPVLASPKREDDGASSENYTPVOLLQSN	764
Db	721	lcedpsgagvprtllempylaspkrededgaseenymypvqllqsn	764

RESULT 8

AA97364

ID. AAY97364 standard; Protein; 630 AA.

AC AAY97364;

DT 14-SEP-2000 (first entry)

Human VR-2 (alternate form) protein.

VR-2; human; vanilloid receptor; nociceptor; pain signalling; KW

KW chromosome 17p11-12; gene therapy.

..... Homo sapiens.

PN WO200029577-A

PD 25-MAY-2000.

PF 12-NOV-1999; 99WO-US26701.

PR 13-NOV-1998; 98US-0108322.

PR 26-FEB-1999; 99US-0258633.

XX

XX

XX

DR N-PSDB; AAA

PT New capsaicin/vanilla

XX

XX

CC human capsa

The present sequence is the protein sequence for an alternate form of human capsaicin/VR-2, which is involved in pain signalling. The coding sequence was isolated by searching a heart cDNA library for genes encoding novel receptors of the capsaicin/vanilloid family, and has been shown to be located at chromosome 17p11-12. This region has been associated with myasthenia gravis, Smith-Magenis syndrome, CORD5, Cone-rod dystrophy, choroidal dystrophy, central areolar and retinal cone dystrophy, and it is possible that the protein may be used to treat or diagnose these disorders. In addition, the gene, protein and its antibodies can be used to diagnose and treat hyperalgesia, inflammation, infection, ischaemia, joint pain, tooth pain, headaches, pain associated with surgery or neuropathic pain, CC

CC possibly via the use of gene therapy.
XX
SQ Sequence 630 AA:

Query Match 81.4%: Score 3258; DB 21; Length 630;
Best Local Similarity 82.5%; Pred. No. 2e-301;
Matches 630; Conservative 0; Mismatches 0; Indels 134; Gaps 1;

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QY 1 MTPSSSPVFRLETLDDGGEDGSEADRGKLDGSGSLPMESEPOGQDRKFAQIRNLNY 60
DB 1 mtpssspvfrlecltddggedgseadrkldtgsqllpmesqfqqedrfapqirvnlny 60
QY 61 RKGTGASQPPNRPDRDLFNNAVSRGVPEDLAGLPEYLSKTSKYLTDESEYTGSTGKTCL 120
DB 61 rtgtgasqppnrdfrdrfnnavsrgvpedlaglpeylsktskyltdeytsygtktcl 120
QY 121 MKAVLNKDVNACILPDLQIDRDSGNPOPLVNAOCTDDYRGHSALHAIERKSIQCVK 180
DB 121 mkavlnlkdvnacllpdlqldrdsqnpplvnaqctddyrghsalhaiersiqcvk 180
QY 181 LLVNGANVHARACGRFFQKGGCTCFEGELPLSLAACKTQMDVSYLLENPHQASLQA 240
DB 181 llvnganvharaqgrffqkggctcfegelpslsaaacktqmdvsvyllenphqaslaq 240
QY 241 TDSOGNTVLHALVMSIDNSAENIALVTSWYDGLQAGARLCTVOLEDIRNLQDLPLKL 300
DB 241 tdsogntvhalvmsidsnsaenialvtswydglqagarlcvledirnlqdlplkl 300
QY 301 AKKEGKIEFRHILQREFSGLSHLSKFTKWCYGPVRSVLYDLASVDSCENSVLEITAF 360
DB 301 akkegiefrhiltrefsglshlskftkwcypvrsvlydlasvdsceensvleitaaf 360
QY 361 HKKSPRHBMVLEPRLNKLQAKMDLIPKPFNLFCNLIVETIFPAVAVYHOPTLKQAA 420
DB 361 hksprhbmvllepnlknlqakmdlipkpfnlfcnlivetifpavavyhoptlkqaa 420
QY 421 PHLKAEVNSMLLTGHIILLLGIVLVGOLWFWRHVFIMSTIDSYFEILLFEQLL 480
DB 421 phlkavnsmltghillllgivlvgolwfwrrhvfimstidsyfeillfeql 480
QY 481 TVVSOVLCLALAEWLPPLVLSALVIGMLLYTRGFQITGYSWVITQVILRDLRFL 540
DB 481 tvvsovlclalaewlpplvlsalvigmllytrgfqitgyswvitylrlfl 540
QY 541 IYLVFLGFAVALVLSIQAMRPEAPTGNATESVQPMGEDEGNGAQYRGILLASLEL 600
DB 541 iylvflgfavalvlsiqamrpeaptgnatesvqpmgedegngaqyrgillleasel 600
QY 601 FKFTIGMGLAFOEDLHFRGMVLLLLAYVLLTYILLNMLALMSETVNSVATDSWIM 660
DB 601 fkftigmglafodlhfmgvllllayvlltyillnmlalmsetyvnsvatdswim 660
QY 661 KLOKAISYLEMENGWYMKCKKORAGVMLTVGTRKPDGSPDERKCFRVEEYNMAWMEQTLEPT 720
DB 661 klokaisylemengwymckkoragvmltvgtkrpdgspderkcfreveynmawmeqtlept 720
QY 721 LCEDPGAGVPTLENPVLASPKEDGASENVVPVQLLOSN 764
DB 721 lcepdgagvptlenpvlaspkedgaseenvvpvqlloasn 764
QY 587 LCEDPGAGVPTLENPVLASPKEDGASENVVPVQLLOSN 630
DB 587 lcepdgagvptlenpvlaspkedgaseenvvpvqlloasn 630

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RESULT 9
AA06556
ID AA06556 standard: Protein; 761 AA.

XX
AC AA06556;
XX
DT 08-OCT-1999 (first entry)
XX
DE Rat vanilloid receptor-related polypeptide 1 (VRRP-1).
XX
KW Vanilloid receptor-related polypeptide 1; VRRP-1; VR2;

KW capsaicin receptor; VR1; rat; vanilloid; analgesic; pain;
KW inflammation; therapy; diagnosis.
XX
XX Rattus rattus.
OS

PN W09937675-A1.

PD 29-JUL-1999.

PF 22-JAN-1999; 99WO-US01418.

PR 22-JAN-1998; 980S-0072151.

PA (REGC) UNIV CALIFORNIA.

PI Brake AJ, Caterina M, Julius DJ;

DR WPI; 1999-469113/39.

DR N-PSDB; AAX87478.

PT New isolated capsaicin receptor polypeptide and related nucleic acid
PT - useful for detecting vanilloid compounds, identifying modulators,
PT and in diagnosis or treatment of e.g. pain and inflammation

PS Claim 4; Page 81-83; 120pp; English.

The present sequence represents rat vanilloid receptor-related polypeptide 1 (VRRP-1 or VR2), as deduced from a cDNA clone (see AAX87478) isolated from a rat brain cDNA library. VRRP-1 is an example of a capsaicin receptor-related polypeptide of the invention. It is not activated by capsaicin or heat, but may interact with the novel capsaicin receptor VR1 (see AA06555). It shows 49% identity with rat VR1. The invention provides vanilloid receptor polypeptides and polynucleotides, including capsaicin receptor-related polypeptides and polynucleotides, as well as expression vectors, host cells and transgenic animals. It also provides a method of using such receptors to identify vanilloid compounds in natural products or to screen candidate compounds that modulate capsaicin receptor function for use as analgesics (vanilloid analogues, therapeutic antibodies, antisense oligonucleotides, capsaicin receptor-encoding polynucleotides for gene therapy), flavour-enhancing agents, etc. Capsaicin receptor-related polypeptides and specific antibodies can also be used for the diagnosis and treatment of human disease and pain.

CC
CC
CC
SQ Sequence 761 AA:

Query Match 76.2%: Score 3051.5; DB 20; Length 761;
Best Local Similarity 77.7%; Pred. No. 1.3e-281;
Matches 598; Conservative 62; Mismatches 93; Indels 17; Gaps 7;

```

QY 1 MTPSSSPVFRLETLDDGGEDGSEADRGKLDGSGSLPMESEPOGQDRKFAQIRNLNY 60
DB 1 mtpssspvfrlecltddggedgseadrkldtgsqllpmesqfqqedrfapqirvnlnf 56
QY 61 RKGTGASQPPNRPDRDLFNNAVSRGVPEDLAGLPEYLSKTSKYLTDESEYTGSTGKTCL 115
DB 61 rkgtgasqppnrdfrdrfnnavsrgvpedlaglpeylsktskyltdeytsygtktcl 116
QY 116 GRTCLMKAVLNKDVNACILPDLQIDRDSGNPOPLVNAOCTDDYRGHSALHAIERKS 175
DB 116 grtclmkavlnkdvnacllpdlqldrdsqnpplvnaqctddyrghsalhaiers 176
QY 176 LQCVKLVNNGANVHARACGRFFQKGGCTCFEGELPLSLAACKTQMDVSYLLENPHQ 235
DB 176 lqcvklvengadvhlaragrtffqkggctcfegelpslsaaacktqmdvsvyllenphq 236
QY 236 ASLQATDSOGNTVLHALVMSIDNSAENIALVTSWYDGLQAGARLCTVOLEDIRNLQDL 295
DB 236 aslqatdsogntvhalvmsidsnsaenialvtswydglqagarlcvledirnlqdl 296
QY 296 TPPLKAEKGKIEFRHILQREFSG-LSHLSRKFTKWCYGPVRSVLYDLASVDSCENSV 354

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|||||
Db 297 tpklkaakegkiefthllqrefsgpyqplsrkfkfewcygprvrslydlsrdsweknsav 356
OY 355 LEIAPHCKSPHRHRVNVLEPINKLQAKWDLLIPKFEFLNFCNLTYMIFFAVAHYHOT 414
Db 357 lejiafhckspnhrmvnlepinkllqekwdrlvsvrfifnfacylvymfiflvayhqs 416
OY 415 LKQAPPHLKAEGNSMLTGHILLLGGIYVLVGOVMYFMRHRVFTWISFDSYEELF 474
Db 417 lqcpaipsskatfgesmllghnllllygilylllqglwyfwrtrllfwstmsyfeillf 476
OY 475 LFQALLTVVSOVLCFLAIFWYPLVLSALVLCMLNLYTRGFORTGITSVMIOKYLND 534
Db 477 llqalltvlsqvlrfmetewyiplvlslvgwlnllytrgfghnqiyssvmlqkvllrd 536
OY 535 LRFLLIYVPEFGFVALVLSLSQEMAREAPGPNATESVOPMEQDEGNAOYRGTL 594
Db 537 llrfllvyvlffgfavalslstrspskapedmstvteqplvygeee--papyrsll 594
OY 595 EASLELFKFTIGMGLAFOEOLHFRGMVLLLLAVLYLLNMLTALMSETVNSVAT 654
Db 595 dslelftktigmglafegqlrfvgvlllllayvlllyvlllmmlalmetvnhvad 654
OY 655 DSWSIWKLOKAISVLEMGYWWC-RKKORAGVMLTVGTRPGDSPDERMCFRVEEYNNAS 713
Db 655 nswsiwklqkalsvlemengywwcrkkhregrlkvgtrgqgtdpderwcfrveevnwa 714
OY 714 WQOTLPTLCEDEPSGAGVPTLENPVLASPPKEDGASSENVPVOLLOS 763
Db 715 wktlptlcsdpsgplgknknp- - -skpgknsaseedhlplqvlys 760

```

RESULT 10

AAM99790

ID AAM99790 standard: Protein; 761 AA.

XX AAM99790:

DT 16-JUN-1999 (first entry)

DE Rat VRPP-1 (VR2) capsaicin receptor.

KW VR1: capsaicin receptor; VR2: VRPP-1; analgesic; diagnosis; human disease; painful syndrome.

OS Rattus rattus.

PM W09909140-A1.

XX 25-FEB-1999.

PF 20-AUG-1998; 98WO-US17466.

PR 22-JAN-1998; 98US-0072151.

PR 20-AUG-1997; 97US-0915461.

PA (RBCG) UNIV CALIFORNIA.

PI Brake A, Caterina M, Julius DJ;

DR WPI: 1999-181023/15.

CC N-PSDB; AAX19730.

PT New capsaicin receptor polypeptide - useful for screening or characterizing capsaicin receptor-binding compounds

PS Claim 4: Page 78-79; 99pp; English.

XX The present sequence is an isolated capsaicin receptor polypeptide
 CC (1). Capsaicin polypeptides are useful for identifying binding compounds
 CC which affect cellular responses. Preferably this is for identifying a
 CC compound that binds (1) and affects a cellular response associated with
 CC capsaicin biological activity (e.g. intracellular calcium flux). The

CC polypeptides and host cells are useful for detecting a vanilloid
 CC compound (an essential structural component of capsaicin) from natural
 CC products by detecting an alteration of intracellular response associated
 CC with capsaicin receptor activity, preferably an alteration of
 CC intracellular calcium levels, and are useful for screening for compounds
 CC for use in analgesics. Capsaicin receptor polypeptides and antibodies
 CC are useful for diagnosis and treatment of human diseases and painful
 CC syndromes. The transgenic mammals can be used to screen for capsaicin
 CC receptor antagonists and agonists. Prior art methods for screening or
 CC characterizing new capsaicin receptor-binding compounds relied on assays
 CC using sensory neurons in culture or in intact animals. The new
 CC polypeptides provide a more sensitive screen.

Sequence 761 AA:

Query Match 76.2%; Score 3051.5; DB 20; Length 761;
 Best Local Similarity 77.7%; Pred. No. 1.3e-281;
 Matches 598; Conservative. 62; Mismatches 93; Indels 17; Gaps 7;

```

OY 1 MTPSSSPYFRLETLDDGCGEDSSEADRGKLDGSGLPMPESQPGCDRFAQIRNLAY 60
Db 1 mtsassppafrletsqdeegnaevnkqyq- - -ppmpespfqredrnspqikvnl 56
OY 61 - - - - -RKGTGA-SOPDPNRPDRDLFNAGRGVPEDLAGEPEYLSKTSKYLTDSYREGST 115
Db 57 ikrpknktsapqgepdrtdrtdrlfsvsrgvpeeltgllaylrwnskyltcsaytegst 116
OY 116 GRTCLMKRAVLNLEKDGYNACILPLDIDRDSGNPQPLVNAQCTDDYRGSHALIAEKRS 175
Db 117 gktclmkavlnldqgyvacimp||gldkdsnpkrlvnaqctdefygsahialateks 176
OY 176 LQCVKLIVENGANVHARACGRFFQKQGCFCYFGEGLPSLACTQMDVSVLLENPHOP 235
Db 177 lqcvklivengadvhiraagrtffqkngctcyfgeglpslaactqwdvvylllenphp 236
OY 236 ASLOATDSQGNVNLVHALVWISDNSAENIALVTSMYDGLQAGARLCTPQGLDIRNLODL 295
Db 237 asleatdsqgnvnlvhalvwnadnspealsvlnmydglqmgarlcptqlaeishngl 296
OY 296 TPCLKLAKEGKLEIFRHILQREPSG-LSHLSRKFTWECYGPVRSVLYDLASVDSCEENS 354
Db 297 tpklkaakegkiefthllqrefsgpyqplsrkfkfewcygprvrslydlsrdsweknsav 356
OY 355 LEIAPHCKSPHRHRVNVLEPINKLQAKWDLLIPKFEFLNFCNLTYMIFFAVAHYHOT 414
Db 357 lejiafhckspnhrmvnlepinkllqekwdrlvsvrfifnfacylvymfiflvayhqs 416
OY 415 LKQAPPHLKAEGNSMLTGHILLLGGIYVLVGOVMYFMRHRVFTWISFDSYEELF 474
Db 417 lqcpaipsskatfgesmllghnllllygilylllqglwyfwrtrllfwstmsyfeillf 476
OY 475 LFQALLTVVSOVLCFLAIFWYPLVLSALVLCMLNLYTRGFORTGITSVMIOKYLND 534
Db 477 llqalltvlsqvlrfmetewyiplvlslvgwlnllytrgfghnqiyssvmlqkvllrd 536
OY 535 LRFLLIYVPEFGFVALVLSLSQEMAREAPGPNATESVOPMEQDEGNAOYRGTL 594
Db 537 llrfllvyvlffgfavalslstrspskapedmstvteqplvygeee--papyrsll 594
OY 595 EASLELFKFTIGMGLAFOEOLHFRGMVLLLLAVLYLLNMLTALMSETVNSVAT 654
Db 595 dslelftktigmglafegqlrfvgvlllllayvlllyvlllmmlalmetvnhvad 654
OY 655 DSWSIWKLOKAISVLEMGYWWC-RKKORAGVMLTVGTRPGDSPDERMCFRVEEYNNAS 713
Db 655 nswsiwklqkalsvlemengywwcrkkhregrlkvgtrgqgtdpderwcfrveevnwa 714
OY 714 WQOTLPTLCEDEPSGAGVPTLENPVLASPPKEDGASSENVPVOLLOS 763
Db 715 wktlptlcsdpsgplgknknp- - -skpgknsaseedhlplqvlys 760

```

```
RESULT 11
AA06560
AA06560 standard; Protein: 727 AA.
AC AA06560;
XX
XX 08-OCT-1999 (first entry)
XX
XX Human vanilloid receptor-related polypeptide 1 (VRRP-1).
XX
XX Vanilloid receptor-related polypeptide 1; VRRP-1; VR2;
XX capsaicin receptor; VR1; human; vanilloid; analgesic; pain;
XX inflammation; therapy; diagnosis.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX FH Misc-difference 194..208
XX FT /note= "unidentified residues"
XX FT Misc-difference 308
XX FT /note= "unidentified residue"
XX FT Misc-difference 311
XX FT /note= "unidentified residue"
XX FT Misc-difference 343..368
XX FT /note= "unidentified residues"
XX FT Misc-difference 404
XX FT /note= "unidentified residue"
XX FT Misc-difference 460..474
XX FT /note= "unidentified residues"
XX FT Misc-difference 558
XX FT /note= "unidentified residue"
XX FT Misc-difference 608
XX FT /note= "unidentified residue"
XX
XX WO937675-A1.
XX
XX 29-JUL-1999.
XX
XX 22-JAN-1999; 99WO-US01418.
XX
XX 22-JAN-1999; 98US-0072151.
XX
XX (REGC ) UNIV CALIFORNIA.
XX
XX Brake AJ, Caterina M, Julius DJ;
XX
XX WPI; 1999-469113/39.
XX
XX New isolated capsaicin receptor polypeptide and related nucleic acid
XX - useful for detecting vanilloid compounds, identifying modulators,
XX and in diagnosis or treatment of e.g. pain and inflammation
XX
XX Claim 4; Page 91-93; 120pp; English.
XX
XX The present, claimed sequence represents a human vanilloid receptor-
XX related polypeptide 1 (VRRP-1 or VR2) sequence predicted from
XX available EST sequences (see AAX97499-501). VRRP-1 (see also AA06559)
XX is an example of a capsaicin receptor-related polypeptide of the
XX invention. It is not activated by capsaicin or heat, but may
XX interact with the novel capsaicin receptor VR1 (see AA06558). The
XX invention provides capsaicin receptor and capsaicin receptor-
XX related polypeptides and polynucleotides, as well as expression
XX vectors, host cells and transgenic animals. It also provides a
XX method of using such receptors to identify vanilloid compounds in
XX natural products or to screen candidate compounds that modulate
XX capsaicin receptor function for use as analgesics (vanilloid
XX analogues, therapeutic antibodies, antisense oligonucleotides,
XX capsaicin receptor-encoding polynucleotides for gene therapy),
XX flavour-enhancing agents, etc. Capsaicin receptor-related
XX polypeptides and specific antibodies can also be used for the
XX diagnosis and treatment of human disease and pain.
XX
XX Sequence 727 AA;
```

```
Query Match 75.8%; Score 3036.5; DB 20; Length 727;
Best Local Similarity 79.1%; Pred No. 3.1e-280;
Matches 620; Conservative 5; Mismatches 82; Indels 77; Gaps 10;

QY 1 MTPSSSPVFRLETTLDGGGDESEADRGRLDFGSGLPPEPSQFOGDRKFAPIRVNLNY 60
DB 1 mtpssspvfrletldgggedseadrgrldfsgslppmesqfgedrxfapqirvnlay 60
QY 61 RKGTGASQDPNRFDPDLFNAVSRGVPEDLAGLPYLKTSKYLTDSYTBGSGTKTL 120
DB 61 rkgtgasqdpnrfdrdrifnavsrgvpedlaglpelylkskylytdseytsgtktl 120
QY 121 MKAVNLKDGVAACILPLQIDRDGSGNPQVLVNAOCTDYYRGHSALAHATKRSIQCYK 180
DB 121 mkavnlkdgvaacilplqlidrdsgnpplvnaqctdyyrghsalhatkrsiqcyk 180
QY 181 LIVENGANVHARACGRFFQKGGTCFFGELPLSLAACKTQMDVSYLLBNPQASLQA 240
DB 181 lvenanganvharaaxxxxxxxxxxxxxxxxxxgelpslackqdvsvyllepnqpslqa 240
QY 241 TDSQNTVJHALVMSDSNAENIALVTSWYDGLQAGARLCPVQLEDIRNODLTPLKL 300
DB 241 tdsqntvlhalvmsdsnaenialvtsmydglqagarlcpvtqledirnlqdltpkl 300
QY 301 AAKGKIEIF-RHIL-QREFSGLS-HLSRKFTF-WCGVPRSLVDLAVDSCSENSYLE 356
DB 301 aakgkixlrxthllasgkifsglkppfprkfcwvimgvprsvxxxxxxxxxxxxxxx 360
QY 357 IIAFHCKSPRRHMYLEPLNKLQAKMDLIPKFLNLCNLIYMFITAVAYHQPILK 416
DB 361 xxxxxxxxprdrhmrvleplnklqakwdlipkfflnlcnlxymfitaavahqplk 420
QY 417 KOAAPHLKAQVNSMLTGHILILLAGITLYLVGQLMYFWR-----HYF 460
DB 421 kqaaphlkaevgnsmlltghlililggyllyvgqkwkfwxxxxxxxxxxxxxfpgh-- 478
QY 461 IWISFDSYFEILFLFQALLTVASQVLCFLATEWMLPLVLSVALVGLMLLVYTRGFQHT 520
DB 479 -----rvvpapacvca---gagleapalllycwl-----pahrh 509
QY 521 GIYSWAIQKVLRLDLRFLLIYLVFLGFPAVALVLSQDAMPREAPFGNATESVQPMEG 580
DB 510 qchd-----pealvlsiqd-wrpeaptgnatesvqpmeg 543
QY 581 QEDEGNGAQRGLLEASLELFKFTTGMGELARQDOLHFRGMVLLLLAVLLTYILLNM 640
DB 544 gedegngagyrigllxaslelfkftlqmgelaifqeglhfrgmvlillayvillyllnm 603
QY 641 LIALMSETVNSVATPSWSIWKLQKATSVLEMENGYWMCRRKORAGVNLVGTGRPDGSPDE 700
DB 604 lialselvnsvaldswslwklqkatsvlemengywcckkqragvnlvgtkpdpdspde 663
QY 701 RMCFRVEEVNMAWSDQTLPTLCEDPGAGVPTLENPVLASPPKEDDQASENVYVQL 760
DB 664 rmcfrveevnmaswqtlptlcedpsgagvptlienpvlasppkeddgaseenvypql 723
QY 761 LOSN 764
DB 724 lqsn 727

RESULT 12
AA09798
AA09798 standard; Protein: 727 AA.
XX
XX AA09798;
XX
XX 16-JUN-1999 (first entry)
XX
XX Human VRRP-1 (VR2) capsaicin receptor.
XX
XX
```

KW VR1: capsaicin receptor; VR2; VRRP-1; analgesic; diagnosis;
 KM human disease; painful syndrome.
 XX
 OS Homo sapiens.
 XX PN W09909140-A1.
 XX PD 25-FEB-1999.
 XX PF 20-AUG-1998; 98WO-US17466.
 XX PR 22-JAN-1998; 98US-0072151.
 XX PR 20-AUG-1997; 97US-0915461.
 XX PA (REGC) UNIV CALIFORNIA.
 XX PI Brake A, Caterina M, Julius DJ;
 XX WP1: 1999-181023/15.
 XX DR
 XX PT New capsaicin receptor polypeptide - useful for screening or
 XX characterising capsaicin receptor-binding compounds
 XX PS Claim 4: Page 86-88; 99pp; English.
 XX
 CC The present sequence is an isolated capsaicin receptor polypeptide
 CC (1). Capsaicin polypeptides are useful for identifying binding compounds
 CC which affect cellular responses. Preferably this is for identifying a
 CC compound that binds (1) and affects a cellular response associated with
 CC capsaicin biological activity (e.g. intracellular calcium flux). The
 CC polypeptides and host cells are useful for detecting a vanilloid
 CC compound (an essential structural component of capsaicin) from natural
 CC products by detecting an alteration of intracellular response associated
 CC with capsaicin receptor activity, preferably an alteration of
 CC intracellular calcium levels, and are useful for screening for compounds
 CC for use in analgesics. Capsaicin receptor polypeptides and antibodies
 CC are useful for diagnosis and treatment of human diseases and painful
 CC syndromes. The transgenic mammals can be used to screen for capsaicin
 CC receptor antagonists and agonists. Prior art methods for screening or
 CC characterising new capsaicin receptor-binding compounds relied on assays
 CC using sensory neurons in culture or in intact animals. The new
 CC polypeptides provide a more sensitive screen.
 CC
 XX Sequence 727 AA:
 SQ
 Query Match 75.8%; Score 3036.5; DB 20; Length 727;
 Best Local Similarity 79.1%; Pred. No. 3.1e-280;
 Matches 620; Conservative 5; Mismatches 82; Indels 77; Gaps 10;

OY 1 MTPSSSPVFRLTLDGQEDGSEADRGKLDGSGLPMESEOGEDRKFAPQIVNLTNY 60
 DB 1 mtpssspvfrletldgqgedgseadrgkldgsglpmpesfggedtkfapqivnltny 60
 OY 61 RKGTGASPDPPNRRDRRLFNAVSRGVPEDLAAGLEPYLSKTSKYLTDESEYTGSTGKTCL 120
 DB 61 rkytgasgpdprfrdrldfnavsrgvpedlaagleylsktskyltdeseytgsgtkccl 120
 OY 121 MKAVINLADGVNACLTPLQLDIDRDSGNPQPLVNAOCTDDYRNGSHALHAIKRSGLQCVK 180
 DB 121 mkavinlkdgvnactlplqlidrdsgnpqplvnaoctddyryghsalhalekrsldgcvk 180
 OY 181 LIVENGANVHARACGRFPOKGGCTCFYFCELPLSLAACKTQMDVVSYLENPHOASIOA 240
 DB 181 livenganvharaxxxxxxxxxxxxxxxgelplslaaactkqdwvvsyllepnghpaslga 240
 OY 241 TDSOGNTVLAHALVMTSDNSAENIALVTSMYDGLAQAGRLCPTVLEDIRMLQDITPLKL 300
 DB 241 tdsogntvhalvmtsdnsaenialvtsmydglqagarcptvgledirmlqditplkl 300
 OY 301 AAKBEKILF-RHIL-QREFSGLS-HLSRKTFE-WCYGPVRSLYDLASVDSCEANSVLE 356
 DB 301 aakegkixlfxrhllasgklsfqlkppfrkftewlmqpvrvxxxxxxxxxxxxxxxxxxx 360

OY 357 IIAFHCKSPHRRHNVVLEPLNKLLOAKNDLLPKFELNPLCLIMFTFANAAYHQPTIK 416
 DB 361 xxxxxxxxxxxpdrhmwvleplnlkllqakwlllpkftflnclnlymflftavayhptlk 420
 OY 417 KOAPHLKAEGVNSMLTGHILILGIGIYLVGOLMYEWMR-----HVF 460
 DB 421 kgaephlkagvnsmltghlililgigilyvgqkwkfxxxxxxxxxxxxxxxfph-- 478
 OY 461 IWISFTDYFEILFLPLQALLVVSQVLCFLAEWLPLLVSLVGLWMLLYTRGFQHT 520
 DB 479 -----rvpapakvcva---gaglaeaplllytwl-----pahrl 509
 OY 521 GIYSWMIOKVLRLDLRLFLILYVLFPGFVALVLSQDAMPPEAPTGPNATESVOPMGC 580
 DB 510 gchd-----pealvsisdq-wrpeapcgnatesvqpmeg 543
 OY 581 QDEGNGAQVRCIGLEASLELFEFTIGMCELAFQEOLEHFGWVLLLLAVLLTYILLNM 640
 DB 544 qdegnagayrqlxaslelffkftlmgelafeqhftrgmvllyllyvlltylllmm 603
 OY 641 LIALMSEYVNSVATDSWSIWKLOKAI SVLEMENGIWCKRKORAGVMTVGTPDGSPE 700
 DB 604 lialsetvnsvatdswsiwklikaisvlemengywcrkkgagvmltvgtkpdgspe 663
 OY 701 RWCFFVEEVNMAWMQOTLPTLCEDPSGAGVPTLTENPVLPASPKDEGASPEENVVPOL 760
 DB 664 rwcfrveevnwasmqotlptlcedpsgagvptltlenpvlpaspkdedgaseenvvpql 723
 OY 761 IQSN 764
 DB 724 lqsn 727

RESULT 13
 AAY97359.
 ID AAY97359 standard; Protein: 436 AA.
 AC AAY97359;
 DT 05-SEP-2000 (first entry)
 XX
 DE Human VR-2 (alternate form) partial protein.
 XX
 KM VR-2: human; vanilloid receptor; nociceptor; pain signalling;
 KM hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KM chromosome 1/p11-12; gene therapy.
 OS Homo sapiens.
 XX
 PN W0200029577-A1.
 PD 25-MAY-2000.
 XX
 PF 12-NOV-1999; 99WO-US26701.
 XX
 PR 13-NOV-1998; 98US-01108322.
 PR 28-DEC-1998; 98US-0114078.
 PR 26-FEB-1999; 99US-0258633.
 PR 19-OCT-1999; 99US-0421134.
 XX
 PA (MILL-) MILLENNIUM PHARM INC.
 XX
 PI Curtis RAJ;
 XX
 DR WP1: 2000-387790/33.
 DR N-PSDB: AAY97359.
 XX
 PT New capsaicin/vanilloid receptor polynucleotides and polypeptides, used
 XX to modulate pain signalling mechanisms
 XX
 PS Claim 11: Fig 3; 183pp; English.
 XX

CC The present sequence is the partial sequence for an alternate form of
 CC human capsacin/vanilloid receptor VR-2, which is involved in pain
 CC signalling. The coding sequence was isolated by searching a heart
 CC cDNA library for genes encoding novel receptors of the
 CC capsacin/vanilloid family, and has been shown to be located at
 CC chromosome 17p11-12. This region has been associated with myasthenia
 CC gravis, Smith-Magenis syndrome, COR5, Cone-rod dystrophy, choroidal
 CC dystrophy, central areolar and retinal cone dystrophy, and it is possible
 CC that the protein may be used to treat or diagnose these disorders. In
 CC addition, the gene, protein and its antibodies can be used to diagnose
 CC and treat hyperalgesia, inflammation, infection, ischaemia, joint pain,
 CC tooth pain, headaches, pain associated with surgery or neuropathic pain,
 CC possibly via the use of gene therapy.

SO Sequence 436 AA:

Query Match 55.9%; Score 2240; DB 21; Length 436;
 Best Local Similarity 76.5%; Pred. No. 1.1e-204;
 Matches 436; Conservative 0; Mismatches 0; Indels 134; Gaps 1;

OY 195 GREFGKGGTCYFPELPISLAACKTQKMDVSYLLENPHQASIQATDSOGNTVLHALVM 254
 DB 1 gtrfkgqgctcyfgeipislaackqwdvsvyllempqpslqatdsqgntvlhalvm 60
 OY 255 ISDNSAENIALVTSMYDGLAQAGARLCPTVQLEDIRNLQDLTPKLAKEGKIEIFRHIL 314
 DB 61 lsdnsaenialvtsmydglqagarlcpvtqledirnlqdltpklakegkieftrhl 120
 OY 315 QREFGSLHSKRFTEWCYGPVRSVLYDLASVDSCEBNSVLEITAFHCKSPRRHRMVLVE 374
 DB 121 qreifslhskrftewcypvrslydlasvdscebsvleita fhcksprrhrmvle 180
 OY 375 PLNKLQAKMDLIRKFLNLCNLTYMFIPTAVAVYHOPTEKKQAPHLKAEVNSMLLT 434
 DB 181 plnklqakmdlirkflnlnclnymfipfavayhoptekkaaphlkaevnsmllt 240
 OY 435 GHILLIGIYLLVQOLWFMWRHVFWSIFDSYFEILFLFQALLTVVSOVLCEFLATEM 494
 DB 241 ghillilgilyllvqolwfmwrhvfwsifdsyfeilflfqalltvvsovlcfalew 300
 OY 495 YPLVLVSAVLYGMLNLVYTRGFORTGITSVMIOKVIKLDLRFLLIYVFLFGFVALV 554
 DB 301 yplvlvsavlygmlnlvyltrgfortgitsvmiokvikldlrflliyvflfgfvalv 335
 OY 555 SLSDAPMPEAPTGPNAIESVQPMGEDEGNGAQYRGILFASLELFFKTIGMGEIAFOE 614
 DB 336 ----- 335
 OY 615 QLHFGMWLLLLAVVLLTYILLNMLIALMSEIVNSVATDSWSIMKLOKATSVLEMENG 674
 DB 336 -----katsvlemeng 346
 OY 675 YWMCKKQKAGVNLTVGTRKPDGSPDERMCFRVEYNMAWMEOITLPTICEPSCGACVPRTL 734
 DB 347 ywmckkqkagvnlvgtkrpdgspdermcfveeynmaswemioitlpticepsegavprtl 406
 OY 735 ENPVLASPKKEDGASENVYVOLLQSN 764
 DB 407 enpvlaspkkedgaseenvyvpvqlsqn 436

RESULT 14
 AA97360
 ID AA97360 standard; Protein: 554 AA.
 XX
 AC AA97360;
 XX
 DT 05-SEP-2000 (first entry)
 XX
 DE Rat partial VR-2 protein.
 XX
 KW VR-2; rat; vanilloid receptor; nociceptor; pain signalling;

KW hyperalgesia; musculoskeletal disorder; neuropathic pain;
 KW gene therapy.

OS Rattus sp.

PN W02000029577-A1.

PD 25-MAY-2000.

PF 12-NOV-1999; 99W0-US26701.

PR 13-NOV-1998; 98US-0108322.

PR 28-DEC-1998; 98US-0114078.

PR 26-FEB-1999; 99US-0258633.

PR 19-OCT-1999; 99US-0421134.

PA (MILL-) MILLENNIUM PHARM INC.

PI Curtiss RAD;

DR WPI: 2000-387790/33.

XX N-PSDB: AAA30256.

PT New capsacin/vanilloid receptor polynucleotides and polypeptides, used

PS to modulate pain signalling mechanisms

XX Claim 11; Fig 4; 183pp; English.

CC The present sequence is the protein sequence for the rat
 CC capsacin/vanilloid receptor VR-2, which is involved in pain signalling.
 CC The coding sequence was isolated by searching a dorsal root ganglion
 CC library for genes encoding novel receptors of the capsacin/vanilloid
 CC family. The human version of this gene is found at chromosome 17p11-12, a
 CC region which has been associated with myasthenia gravis, Smith-Magenis
 CC syndrome, COR5, Cone-rod dystrophy, choroidal dystrophy, central areolar
 CC and retinal cone dystrophy, and it is possible that the human protein may
 CC be used to treat or diagnose these disorders. In addition, the human
 CC gene, protein and its antibodies can be used to diagnose and treat
 CC hyperalgesia, inflammation, infection, ischaemia, joint pain, tooth pain,
 CC headaches, pain associated with surgery or neuropathic pain, possibly via
 CC the use of gene therapy.

XX Sequence 554 AA:

Query Match 55.7%; Score 2230; DB 21; Length 554;
 Best Local Similarity 79.0%; Pred. No. 1.4e-203;
 Matches 437; Conservative 42; Mismatches 66; Indels 8; Gaps 4;

OY 213 LSLACTKQMDVSYLLENPHQASIQATDSOGNTVLHALVMISNSAENIALVTSMYDG 272
 DB 7 lsjaactkqwdvsvyllempqpslqatdsogntvlhalvmiadnspeasvlyhmydg 66
 OY 273 LLOAGARLCPTVQLEDIRNLQDLTPKLAKEGKIEIFRHILQRESG-LSHLSKRFTEW 331
 DB 67 llqmagarlcpvtqleesnhqdltpklakegkieftrhlqreispypqpslskflew 126
 OY 332 CYGPVRSVLYDLASVDSCEBNSVLEITAFHCKSPRRHRMVLLEPMLKLQAKMDLIRK 391
 DB 127 cygpvrslydlasvdscebsvleita fhcksprrhrmvlelpmklqakmdlirkf 186
 OY 392 PLNKLQAKMDLIRKFLNLCNLTYMFIPTAVAVYHOPTEKKQAPHLKAEVNSMLLTG 451
 DB 187 plnklqakmdlirkflnlnclnymfipfavayhoptekkaaphlkaevnsmlltgh 246
 OY 452 WYFWRHVFWSIFDSYFEILFLFQALLTVVSOVLCEFLATEMWRPLVLSVLYGMLNL 511
 DB 247 wyfwrhvfwsifdsyfeilflfqalltvvsovlcfalewyrplvlsvlygmlnl 306
 OY 512 YTRGFORTGITSVMIOKVIKLDLRFLLIYVFLFGFVALVSLSDAPMPEAPTGPNA 571
 DB 307 ytrgfortgitsvmiokvikldlrflliyvflfgfvalvslsdapmpeaptgpnas 366
